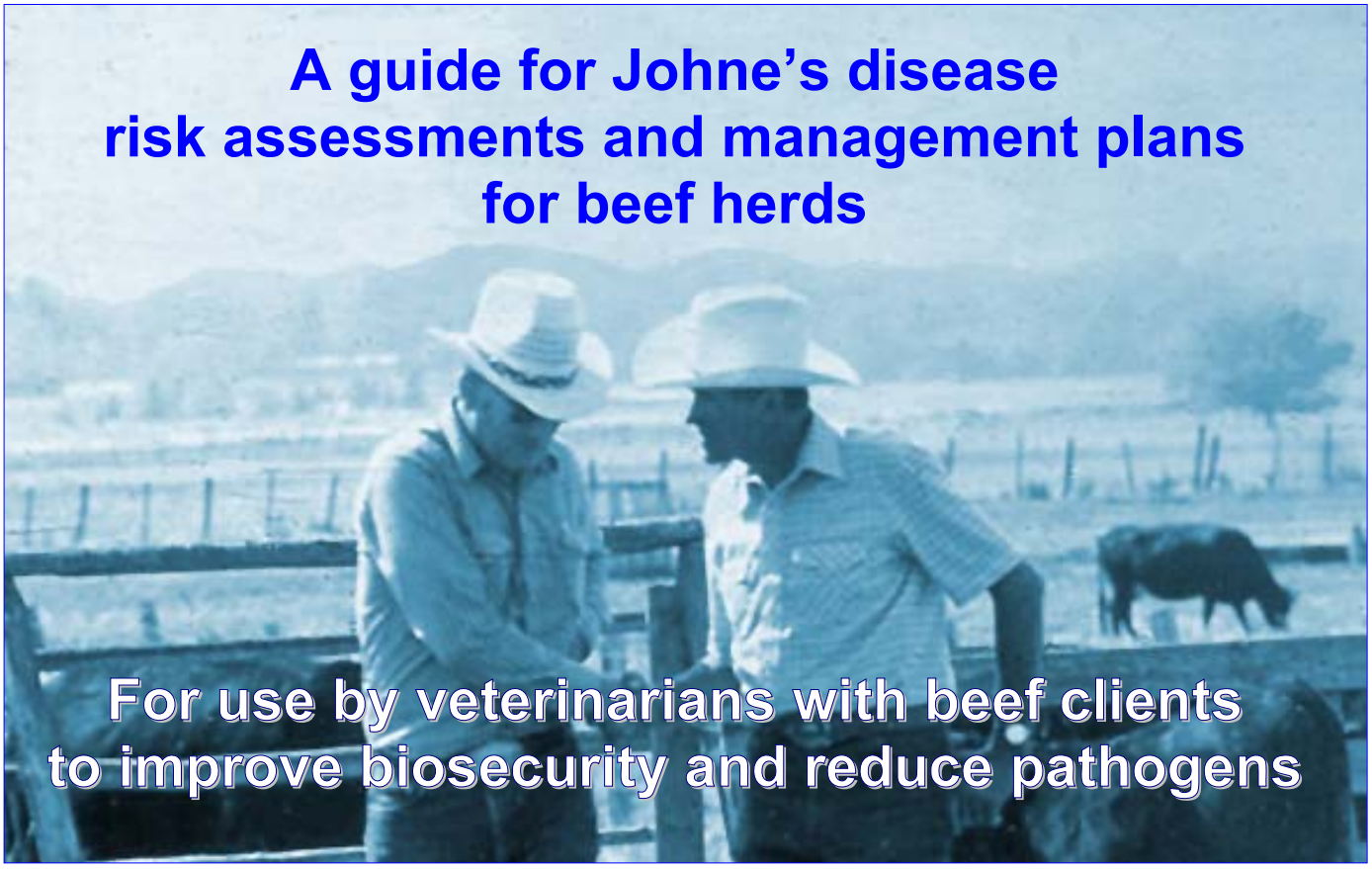
Handbook for Veterinarians and Beef Producers



Approved for distribution and use by the United States Animal Health Association, Johne's Committee and the National Johne's Working Group

For explanation and/or instructions on how to complete this document, refer to the instruction handbook entitled, "How to Do Risk Assessments and Management Plans for Johne's Disease".

Acknowledgements

This Manual is an evolution from previous editions that were used to complete risk assessments and develop management plans to prevent or control Johne's disease in cattle herds for the Voluntary Bovine Johne's Control Program.

The First Edition was designed and edited by:
C. A. Rossiter Burhans Poulin Grain, Inc. Newport, Vermont
D. Hansen Oregon State University
L. J. Hutchinson The Pennsylvania State University
R. H. Whitlock University of Pennsylvania

The Second Edition was designed and edited by
C. A. Rossiter Burhans Poulin Grain, Inc. Newport, Vermont
D. Hansen Oregon State University
R. H. Whitlock University of Pennsylvania
Centers for Epidemiology and Animal Health, NAHMS Staff

Previous editions were reviewed and approved for distribution by the National Johne's Working Group (NJWG), and the Johne's Committee of the United States Animal Health Association (USAHA)

The Third Edition 2003 was designed, edited and reviewed by members of the USAHA Risk Assessment, Herd Management and Education Standards Task Force for the Voluntary Bovine Johne's Control Program. They were appointed by the Co-directors of the NJWG as an ad hoc group of the USAHA.

Don Hansen, CVM, Oregon State University (Chair)
Members listed in alphabetical order
Christine Rossiter Burhans, Poulin Grain, Inc. Newport, Vermont
Michael Carter, National JD Program Coordinator, USDA, APHIS, VS
Michael Dalrymple, USDA, APHIS, VS, CEAH
Karen Jordan, Private Practice, Silver City, North Carolina
Pepi Leids, Field Veterinarian, NYS Division Animal Industry, New York
Brian McCluskey USDA, APHIS, VS, CEAH
Brad Peterson, District Veterinarian Department of Agriculture, Minnesota
Allen Roussel, CVM, Texas A & M University

Current Herd Health Status and Concerns (Filling out this page is optional)

Collecting this information will provide important information to consider when drafting Johne's management plan. Listed here are the herd's performance-limiting health issues and/or the level of concern that the owner has for them. Many of the potential health and production problems listed below may be already addressed by the owner. The final Johne's management plan should blend in with these current performance-limiting health issues and concerns.

Fill in requested information, circle choice or specify the incidence (or level of concern or priority) by checking your choice (U, 1, 2 or 3) in the box next to listed disease.

U= unknown incidence or concern
1= OK, low incidence, not a current concern
2= Moderate incidence, may be a concern
3= Significant incidence, unsatisfactory, needs attention

Suckling-Calf Health and Disease				
Pre-wean mortality (Last 12 mos.)				
Calf vigor (satisfactory / unsatisfactory)				
Calf growth (satisfactory / unsatisfactory)				
Scours	U	1	2	3
Pneumonia	U	1	2	3
Other	U	1	2	3
Weaned Heifer and Bull Health and Disease				
Growth (satisfactory / unsatisfactory)				
Heifer age at 1st calving (months)				
Breeding soundness (bulls) (satisfactory / unsatisfactory)				
Breeding program (heifers) (satisfactory / unsatisfactory)				
Pneumonia	U	1	2	3
Parasitism	U	1	2	3
Other	U	1	2	3
Periparturient Disease in Cows and 1st Calf Heifers				
Grass Tetany	U	1	2	3
Retained Placenta	U	1	2	3
Dystocia Trauma	U	1	2	3
Prolapse (specify type)	U	1	2	3
Other	U	1	2	3
Culling Information and Incidence				
Overall cull rate				
Cull rate in 1st calf heifers				
Due to Age	U	1	2	3
Open	U	1	2	3
Due to Injury	U	1	2	3
Low calf-weaning weight	U	1	2	3
Complications from dystocia	U	1	2	3
Other	U	1	2	3
Infectious Disease				
Calves weaned as % of bred cows and heifers				
Bred but open cows and heifers or Abortions / year				
Johne's	U	1	2	3
Bovine Virus Diarrhea	U	1	2	3
Clostridial infection	U	1	2	3
Campylobacteriosis	U	1	2	3
Trichomoniasis	U	1	2	3
Other	U	1	2	3
Reproduction Performance				
Heat detection (If applicable)				
Conception rate (If applicable)				
Pregnancy rate				
Natural service / Artificial Insemination (circle choice)				
Other related concerns				

Herd Information, owner goals and biosecurity issues

Farm owner _____ **Date** _____

Farm address_____

Herd Veterinarian_____ **Phone**_____

General Herd Information	
Key farm management (decision-makers, key employees)	
Current herd inventory Cows _____ 1st Calf Heifers _____ **Total** _____ Bred heifers _____ Unbred heifers _____ Bulls _____ Yearling Bulls _____ **Total head** _____	
In addition to beef cattle, what other animals do you raise?	
Farm or Ranch Goals and some biosecurity questions	
Do you plan to be raising beef cattle in five years?	
Describe short and longer-term goals or priorities for the enterprise. Consider Herd size, Health and Performance, Facilities, Business / Employee Management, Family goals, Environmental Issues, Markets, Beef Quality, or other.	
Short-term (this year)	**Long term (3-5 years)**
What are your current herd performance values? (For example weaning weight, % pregnant, etc.)	Herd performance goals
What are your top five overall concerns for your operation?	
Herd health concerns you are addressing or plan to address	
Management concerns or facilities issues you are addressing or plan to address	
List how you obtain replacements (E.g., home raised, market, single owner, etc)	List planned changes for obtaining replacements
If animals are raised elsewhere and return to the ranch, describe how their biosecurity is maintained?	
List how you obtain herd additions (E.g., dealer, market, single owner, etc)	What health prerequisites do you require for herd additions?
How are cows identified?	How are their calves identified as theirs?
Outline vaccination routine for cows and 1st calf heifers	
Outline vaccination routine for retained yearling heifers and bulls	
Outline vaccination routine for calves	

Herd Risk Assessment history and prevalence of Johne's Disease

- ❑ How long has the herd been here?_____
- ❑ How was it assembled? _____
- ❑ What percent of the current herd was born on the premises?_____ % purchased?_____
- ❑ What percent of the herd was born here, but raised elsewhere? _____
- ❑ Were those animals commingled with animals from other locations? Yes No
- ❑ When was the 1st clinical case of Johne's diagnosed or suspected (year)?_____
- ❑ Age and source (home raised or purchased) of 1st case? _____
- ❑ What was the youngest case (age, date, source)? _____

List clinical cases beginning with most recent (use another sheet if needed)

ID	Date	Approx. Age	Home raised or from outside	Offspring ID still in herd

Record information from the last 12 months

Information Category	1st cal	2nd cal	3+ cal	Total	%of herd
Clinical Johne's cases, eg, chronic diarrhea or chronic weight loss					
Cattle culled last 12 mos					
Johne's cases as % of cows culled					
Number animals with positive ELISA results					
Number animals with positive fecal cultures					

Introduction of new cattle

Group	No last 12 mos	JD status of seller herd Test negative unknown, etc	No 2 - 5 yrs ago	JD status of seller herd Test negative unknown, etc
Cows				
Heifers				
Bulls				
Total				

Estimate the prevalence of Johne's disease in herd

[Low Moderate High] Place an X on line above where you estimate herd prevalence might be.		
Consider number, age and time frame of clinical cases for estimating prevalence of Johne's in the herd.		
You may also use information from boxes below to help estimate herd prevalence.		
Low	**Moderate**	**High**
No or rare clinical cases Clinical only in purchased animals ~< 5% test prevalence mostly in older animals Excellent management and sanitation.	Few clinical cases in home-reared animals Recent history of 2-5% clinicals/year ~6-19% test prevalence mixed group Management allowed for some contact of weaned young stock with manure or older animals	Frequent in home-reared animals Increasing clinical cases Decreasing age of clinicals ~> 20% test prevalence mixed group Severe risks exist for contact of young stock with manure of mature animals

Risk Assessment Scores (based on visual observation of each environment and investigation of policy).
Estimate the risk for fecal/oral and colostrum/milk disease spread, or gap in farm's biosecurity, for each management practice. Note how current management conditions differ from past. Ideally producer & veterinarian score risks independently then compare & discuss relative importance in plan development of management. See Step 4 in the 'How to Do Risk Assessments and Managements Plans' handbook, pages 3 - 4 and 6 – 7 for guidelines to completing area risk assessments.

A. Calving Area Risk Factors (Place an X in the box to the right of the management practice that most closely signifies the risk for that item.)	0.	1 V. Low	2. Low	3	4	5 Moderate	6	7	8. High	9	10. V. High
1. Multiple animal use [Single use pen → Very crowded calving area]											
2. Manure build up risk for calf ingestion [Clean dry → Dirty wet]											
3. Manure soiled udders / legs [Never → Always]											
4. Presence of JD clinicals / suspects [Never → Always]											

Notes / Current vs. Past

Maximum score is 40. Your herd score is _____. Consider the impact of JD prevalence on ability to reduce risks.
Estimate the likely risk for spreading Johne's in the calving area: **Very Low** **Low** **Moderate** **High** **Very High** *(Circle choice)*

B. Nursing Calf Risk Factors	0.	1. V. Low	2. Low	3.	4.	5. Mod.	6.	7.	8. High	9.	10. V. High
1. Cow/calf pairs kept with JD clinical or suspect animals [Never → Frequently]											
2. Manure build up risk for calf ingestion [Clean dry → Hi manure load]											
3. Possible manure contamination of water: by cows, traffic splatter, equipment or people. [Never → Frequently]											
4. Possible manure contamination of feed: by cows, traffic splatter, equipment or people. [Never → Frequently]											
5. Sick calves exposed to sick cows [Never → Frequently]											

Notes / Current vs. Past

Maximum Score is 50. Your herd score is _____. Consider the impact of JD prevalence on ability to reduce risks.
Estimate the risk for spreading Johne's in pre-weaned calves: **Very Low** **Low** **Moderate** **High** **Very High** *(Circle choice)*

C. Weaned Heifers and Bull Calves Risk Factors	0.	1. V	2.	3.	4. Mod.	5.	6.	7. V
1. Direct with cows or their manure. [Never → Frequently]								
2. Possible manure contamination of feed: stored feed, equipment, from cows, traffic splatter, people or runoff. [Never → Frequently]								
3. Potential for contamination of water: shared with or by cows, traffic splatter, runoff or people. [Never → Frequently]								
4. Share pasture with cows/bulls. [Never → Frequently]								
5. Manure spread on forage grazed/harvested same season. [As above]								

Notes Current vs. Past

Maximum Score is 35. Your herd score is _____. Consider the impact of JD prevalence on ability to reduce risks.

Estimate the risk for spreading Johne's in post weaned heifers: **Very Low** **Low** **Moderate** **High** **Very High** *(Circle choice)*

D. Bred Heifer and Yearling Bull Risk Factors	0.	1. V Low	2.	3. Mod	4.	5. V High
1. Direct contact with cows or their manure. [Never → Frequently]						
2. Possible manure contamination of feed: stored feed, equipment, cows, traffic splatter, people or runoff. [Never → Frequently]						
3. Possible manure contamination of water sources: shared with cows, by cows, traffic splatter, runoff or people. [Never → Frequently]						
4. Share pasture with cows/bulls [Never → Frequently]						
5. Manure spread on forage grazed/harvested same season. [As above]						

Notes Current vs. Past

Maximum Score is 25. Your herd score is_____. Consider the impact of JD prevalence on ability to reduce risks.

Estimate the likely risk for spreading Johne's in bred heifers: **Very Low** **Low** **Moderate** **High** **Very High** *(Circles choice)*

E. Cow Risk Factors	0.	1. Low	2.	3	4. High
1. Possible cow manure contamination of feed: when fed or stored, by equipment, traffic splatter, runoff or people. [Never → Frequently]					
2. Possible manure contamination of water: by cows, traffic splatter, runoff, people. [Never → Frequently]					
3. Direct access to accumulated or stored manure. [Never → Frequently]					
4. Manure spread on forage grazed or harvested the same season. [As above]					

Notes Current vs. Past

Maximum Score is 16. Your herd score is _____. Consider the impact of JD prevalence on ability to reduce risks.

Estimate the likely risk for spreading Johne's among cows: **Low** **Moderate** **High** *(Circle choice)*

F. Sources of Additions and Replacements	Number of Animals				
	1-5	6-12	13-20	21-50	>50
1. Get additions or replacements from Level 2-4 Status Herd	0	2	4	6	8
2. From low risk herds, Level 1 or pre-tested herds	10	11	12	13	14
3. From single source non-tested or non-program herds	20	22	23	26	28
4. From multiple sources non-tested or non-program herds or markets	30	34	36	38	40

Comments

(Circle the square in each row that reflects management in the past 12 months. Include ET recipients and leased bulls)

Maximum Score is 60. Your herd score is_____. Consider the impact of JD prevalence on ability to reduce risks.

Estimate the likely risk from herd additions/replacements: **Very Low** **Low** **Moderate** **High** **Very High** *(Circle Choice)*

Risk Assessment Summary

Completing this Table is optional.

However calculating the herd score for each area as a percent of the area's maximum score and as a percent of the herd's total score will highlight the top risk areas to address in the management plan.

Risk Factor Areas	Maximum Score	Your Herd Score	Each Area Herd Score / Each Area Max Score (%)	Herd Score each Area / Your Total Herd Score (%)
Calving area	40			
Pre-weaned heifers	50			
Post-Weaned heifers	35			
Bred heifers	25			
Cows	16			
Additions/Replacements	60			
Total	**226**			

List the risk factors of most importance identified by assessment

Building the elements of the testing strategy for the Johne's management plan. See Step 5 in the 'How to Do" booklet pages 8 for details.

1. What is the testing scheme expected to accomplish, how it will help achieve herd plan objectives?
2. What test (s) will be used?
3. Who will be tested?
4. When?
5. What decision (s) will be made on results? Consider higher vs. lower risk 'test-positive' cattle.

Assembling the Johne's Disease Management Plan

See Step 6, pages 8 – 10 in the 'How to Do' handbook for guidelines. Issues to integrate include:

1. The owner's Johne's management plan objectives (e.g., Find out if JD is present, Eliminate the infection from herd, Prevent introduction into herd, Establish official test negative or low risk status).

2. List planned management changes for each area or management group brought to light by the risk assessment. If there are no changes planned for a specific area or group, simply list current herd management procedures.

3. Be certain to coordinate Johne's management procedures in this plan with other health/ management objectives already in place. It may serve as an incentive for owners with low risk herds thinking of seeking official status. Especially note where these other objectives and health concerns will benefit from the Johne's management efforts that are outlined in the plan, (e.g., lower calf mortality or morbidity, healthier fresh cows, etc.). See Step 7, pages 10 and 11, in the 'How to Do' handbook for guidelines.

4. Before signing off on this management plan, be certain the overall strategy is comprehensive and effective enough to meet management goals. The plan should take current JD prevalence estimate into account for setting realistic goals. Proposed actions should be practical and feasible to implement and *they may be applied in phases.* Procedures should integrate with available resources and other management priorities. See Step 8, page 12, in the 'How to Do' handbook for guidelines.

Johne's Management Plan

What are the objectives of the herd plan? ☐ Determine status of herd ☐ Prevent JD introduction into herd ☐ Prevent further spread
☐ Establish test negative status ☐ Reduce the infection in herd ☐ Other

Management practice to reduce identified risks for Johne's disease in this herd	How does practice benefit and/or integrate with existing health / management objectives	Priority Lo, M, or Hi	Person(s) In charge
Testing strategy			

Name of veterinarian who completed this risk assessment and management plan_____

Owner's Signature _____Veterinarian's signature_____

Note: Under WI St. 95.232, Any information kept by the department that identifies the owners of livestock herds infected, or suspected of being infected, with paratuberculosis is not subject

to inspection or copying under s. 19.35 except as the department determines is necessary to protect the public health, safety or welfare.